

Application No. 10/033,586

**Amendments to the Specification:**

**1. Please replace paragraph [0075] with the following amended paragraph:**

Figure 11 provides a flowchart 400 describing an incremental classifier process employing "folding in" for determining user profile attributes. See Hofmann [[Hofman]], Thomas, "Probabilistic Latent Semantic Indexing," Proc. SIGIR '99, pp. 50-57, 1999, for background concerning "folding in", which is incorporated by reference herein. An EM process is run using data from a training set of users having a known user profile attribute. The training set data is used to initialize parameters utilized by the EM process. As a result of the EM process, a value for the conditional probability of a web page  $s$  given a user profile attribute  $g$  is determined:  $P(s|g)$ . A second EM process is run to "fold in" data for a test user in order to determine a conditional probability of the classes of the user profile attribute sought to be determined, given the test user:  $P(g|u)$ .

**2. Please replace paragraph [0086] with the following amended paragraph:**

To improve the accuracy of the probabilistic classifier discussed above, tempering can be used to prevent overfitting of data. In one embodiment, expectation step 445 is calculated as follows:

$$P(g|s,u) = \frac{[P(s|g)P(g|u)]^B}{\sum_{g'} [P(s|g')P(g'|u)]^B}$$

where  $B$  is initialized to a value of 1 and can be reduced as desired to improve accuracy. See Hofmann [[Hofman]], Thomas, "Probabilistic Latent Semantic Indexing," Proc. SIGIR '99, pp. 50-57, 1999.